

# NEVADA ENVIRONMENTAL RESPONSE TRUST

LE PETOMANE XXVII, INC., NOT INDIVIDUALLY BUT SOLELY AS ENVIRONMENTAL RESPONSE TRUST TRUSTEE

## AUGUST 10, 2017 MID-YEAR CHECK-IN MEETING

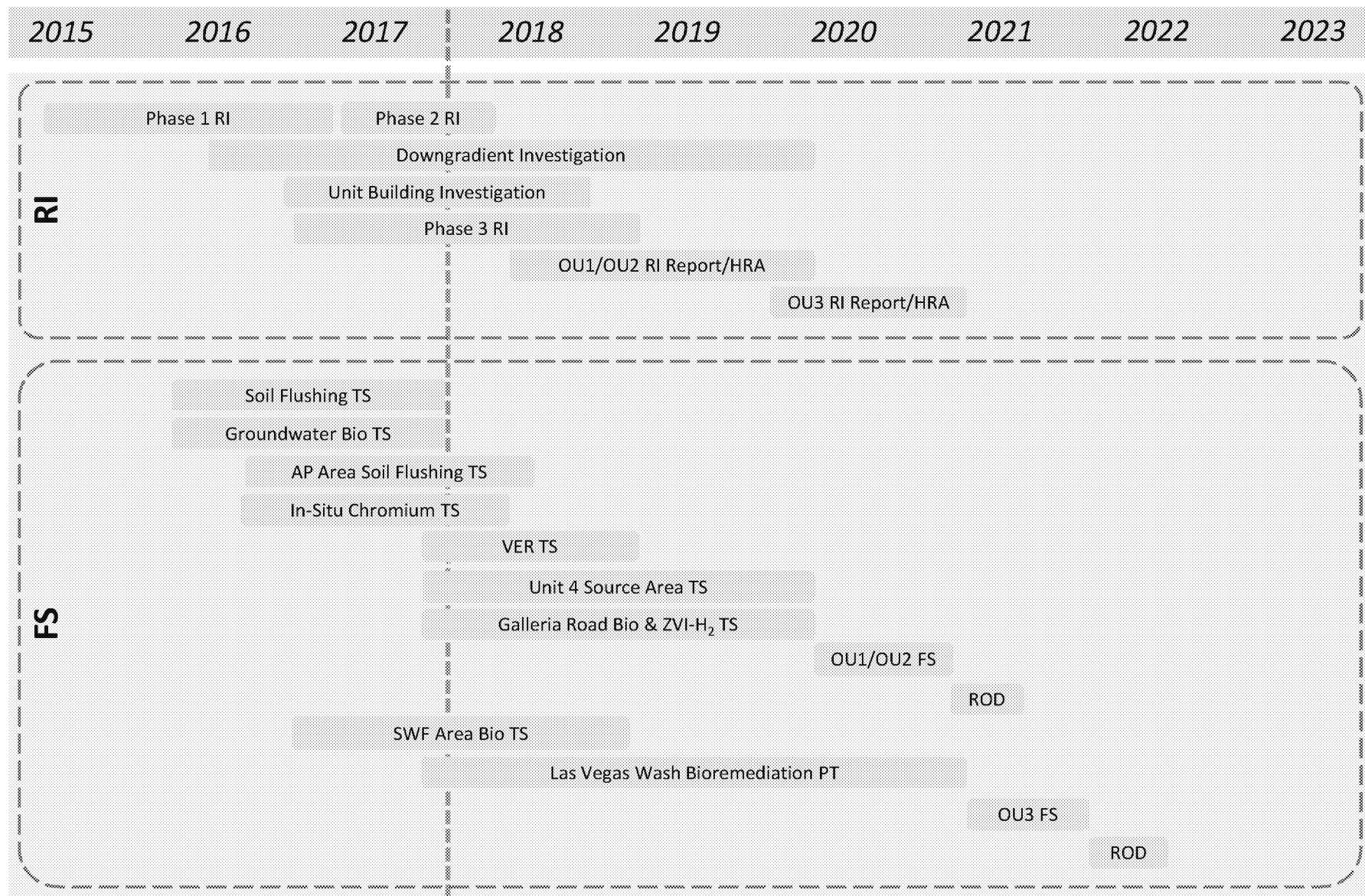
# 2017 MID-YEAR CHECK-IN

## Agenda

- Initial Remarks
- Program Strategy / Updated Schedule
- Accomplishments in 2017 (to-date)
- Pending Accomplishments in 2017
- NERT Goals and Priorities for 2017
- COP Update
- NERT Cost Controls
- NERT Self Appraisal

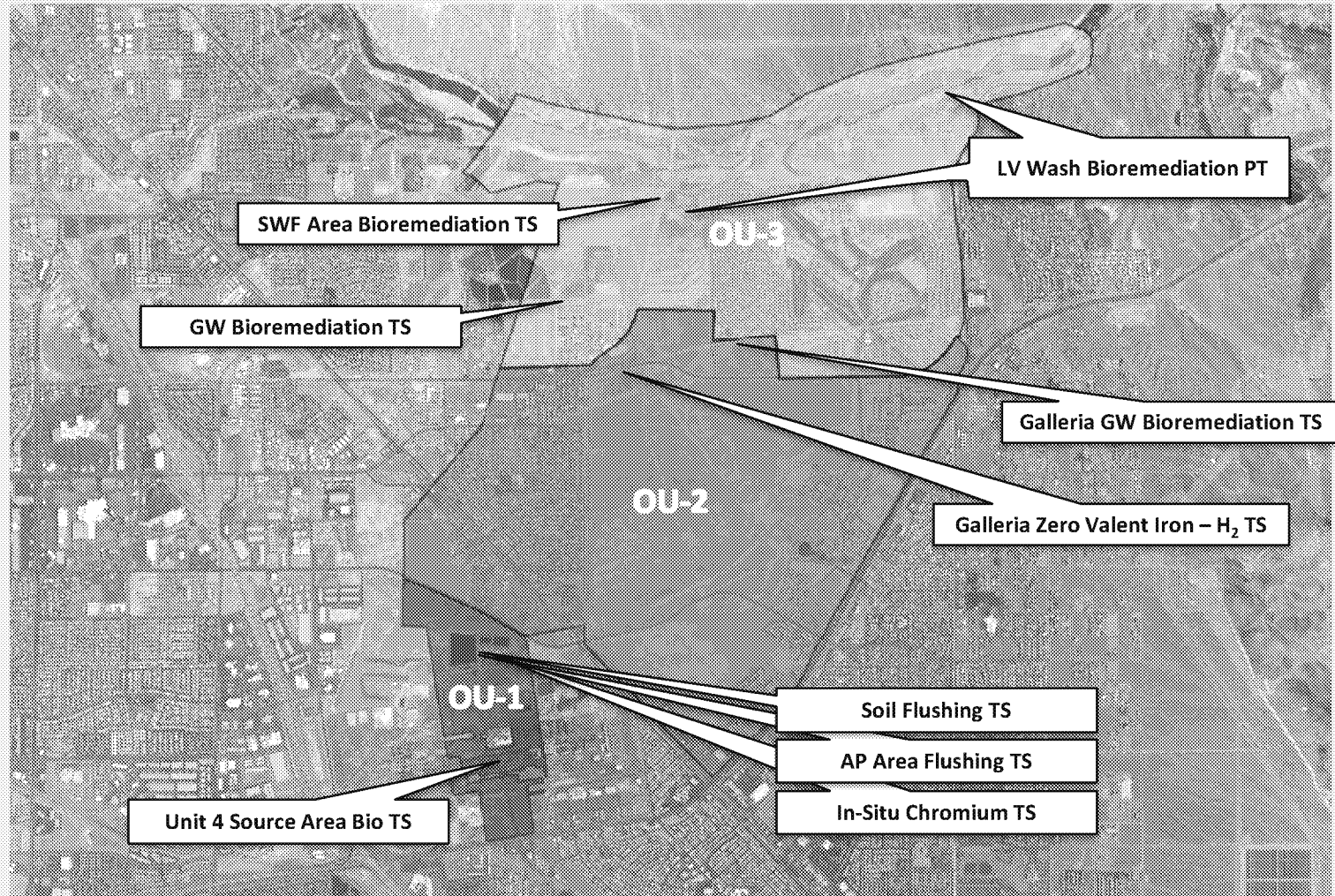
# NEVADA ENVIRONMENTAL RESPONSE TRUST

## PROGRAM STRATEGY



# NEVADA ENVIRONMENTAL RESPONSE TRUST

## PROGRAM STRATEGY





# 2017 ACCOMPLISHMENTS

## Completed Tasks – 1<sup>st</sup> Q

- Prepared Weir Dewatering Treatment NPDES Permit Application (December 28<sup>th</sup>)
- Prepared 60% Design – Weir Dewatering Treatment Project (January 3<sup>rd</sup>)
- Presented NERT Overview to US EPA management team and NDEP (January 5<sup>th</sup>)
- Prepared GWETS Pipeline Leak Investigation Contingency Plan for BWPC (January 26<sup>th</sup>)
- Approval of the AP-5 Pond Closure Plan (January 27<sup>th</sup>)
- Initiated Phase 2 RI Field Work (February 6<sup>th</sup>)
- Prepared Weir Dewatering Treatment Biological Survey and Assessment (February 7<sup>th</sup>)
- Completed transfer of AP-5 sediment (February 8<sup>th</sup>)
- Prepared Stormwater Conveyance Modification and Property Line Grading Project Report (February 15<sup>th</sup>)
- Completed tamarisk removal along Historical Lateral Weir Pipeline (February 15<sup>th</sup>)

# 2017 ACCOMPLISHMENTS

## Completed Tasks – 1<sup>st</sup> Q

- Finalized Site Management Plan, Revision 3 (February 20<sup>th</sup>)
- Presented Continuous Optimization Program (COP) 2016 Annual Summary and 2017 Proposed Strategy (February 22<sup>nd</sup>)
  - Continued AWF Optimization (ART-2 and ART-8 extraction rate increases)
  - IX System Deployment/SWF Optimization
  - AP Area Soil Flushing Treatability Study (Plots 1 and 2)
  - Treatability Studies
    - SWF Area Groundwater Bioremediation
    - VER
    - Unit 4 Bioremediation
- Presented conceptual approach for Las Vegas Wash Pilot Study, Unit 4 Bioremediation Treatability Study, and VER Bioremediation Treatability Study to NDEP and US EPA (February 22<sup>nd</sup>)

# 2017 ACCOMPLISHMENTS

## Completed Tasks – 1<sup>st</sup> Q

- Prepared 75% Design – Weir Dewatering Treatment Project (March 1<sup>st</sup>)
- Prepared Soil Flushing Treatability Study Results Report (March 2<sup>nd</sup>)
- Revised Groundwater Monitoring Plan Sampling and Analysis Plan (March 27<sup>th</sup>)
- Review treatment technologies from APT Water and ToxSorb for potential treatment of perchlorate in groundwater (January – March)

## 2017 ACCOMPLISHMENTS

### Completed Tasks – 2<sup>nd</sup> Q

- Issuance of Minor Air Source Permit (April 12<sup>th</sup>)
- Initiated 1<sup>st</sup> injection of carbon substrate for In-Situ Chromium Treatability Study (April 17<sup>th</sup>)
- Prepared 2016 Semi-Annual Remedial Performance Tech Memo (April 29<sup>th</sup>)
- Updated Community Involvement Plan (May 3<sup>rd</sup>)
- Prepared Phase 5 Transient Groundwater Flow Model Response to Comments (May 3<sup>rd</sup>)
- Prepared Phase 3 RI Work Plan (May 7<sup>th</sup>)
- Prepared Units 4 and 5 Building Investigation Second Mobilization Technical Memorandum (May 8<sup>th</sup>)
- Received BOR Permit for weir-dewatering treatment access (May 10<sup>th</sup>)
- Prepared Parcel C Soil Removal Report (May 10<sup>th</sup>)
- Received \$3,784,451 from DOD, 100% payment of 2015 claim (May 15<sup>th</sup>)

## 2017 ACCOMPLISHMENTS

### Completed Tasks – 2<sup>nd</sup> Q

- Prepared Minor Source Air Permit for Weir Dewatering Treatment Plant Generator (May 17<sup>th</sup>)
- Presented VER Treatability Study Technical Approach (May 23<sup>rd</sup>)
- Prepared 100% Design - Weir Dewatering Treatment Project (June 9<sup>th</sup>)
- Installed algae treatment system in GW-11 (June 15<sup>th</sup>)
- Initiated implementing the Greener Cleanup BMPs Checklist as part of our Environmental Footprint Analysis (June 15<sup>th</sup>)
- Coordinated 2017 Community Interview Meeting (June 21<sup>st</sup>)
- Initiated Surface Water Monitoring Program (June 26<sup>th</sup>)
- Presented LVW Bioremediation Pilot Study technical approach (June 27<sup>th</sup>)
- Prepared GWETS Effluent Line Conceptual Evaluation Report (June 30<sup>th</sup>)
- Prepared IX System Operation and Efficiency Evaluation (June 30<sup>th</sup>)

# 2017 ACCOMPLISHMENTS

## \* Completed Tasks – 3<sup>rd</sup> Q

- Prepared Revised Soil Flushing Treatability Study Report (July 3<sup>rd</sup>)
- Prepared Weir Dewatering Treatment Worker Education and Awareness Program (July 6<sup>th</sup>)
- Completed procurement of long-lead items for Weir Dewatering Treatment Project and awarded subcontractor contracts (July 14<sup>th</sup>)
- Identified and contracted with ARCADIS for AP-5 closure evaluation; On-site meeting with ARCADIS and Tetra Tech (July 11<sup>th</sup>)
- Initiated AP-5 treatment (July 17<sup>th</sup>)
- Prepared Soil Background Study Work Plan (July 18<sup>th</sup>)
- Negotiated AP-5 O&M Agreements with and ETI (June 19<sup>th</sup>) and Tetra Tech (July 20<sup>th</sup>)
- Prepared Parcels C, D, and G HRA (July 31<sup>st</sup>)
- Engaged with BRC regarding access terms for Eastside and A/B efforts. (July, ongoing)

\* Through August 1, 2017

## 2017 PENDING ACCOMPLISHMENTS

### Scheduled – 3<sup>rd</sup> Q

- Submit VER Treatability Study Work Plan
- Revise Phase 3 RI Work Plan
- Submit Barrier Wall Geophysical Integrity Evaluation Work Plan
- Submit Capture Evaluation and Matrix Diffusion Study Work Plan
- Submit Galleria Road ZVI Treatability Study Work Plan
- Submit LVW Bioremediation Pilot Study Work Plan
- Submit HLC Mass Estimate and Performance Metrics Technical Memorandum
- Submit Site Management Plan Annual Report
- Initiate SWF Area Bioremediation 1<sup>st</sup> Injection
- Increase AP-5 treatment rate to 85% plant loading capacity

\* Through August 1, 2017

## 2017 PENDING ACCOMPLISHMENTS

### Scheduled – 4<sup>th</sup> Q

- Submit Galleria Road Bioremediation Treatability Study Work Plan
- Submit Unit 4 Bioremediation Treatability Study Work Plan
- Submit Annual Remedial Performance Report
- Submit Parcel F HRA
- Complete Units 4 and 5 Third Mobilization Field Effort
- AP-5 Pond Closure Implementation
- Initiate VER Treatability Study
- Submit BHRA Interim Report: Identification of COPCs and Decision Units for Operable Unit 1, Revision 1
- Submit Parcel H HRA
- Initiate APT Pilot Test
- Submit In-Situ Chromium Treatability Study Results Report
- Finalize access terms with BRC, CoH and Tuscany



# FINANCIAL ACCOMPLISHMENTS

## Realization of IPS

	MARKET VALUE (6/30/2017)	PROJECTED ANNUAL DIVIDEND/INTEREST
<b>FIXED INCOME</b>		
Cash	\$ 43,752,441	\$ 320,049
T-Bills, Bonds & Debt	\$ 847,539,611	\$ 13,492,668
<b>EQUITIES</b>		
US Equities and REITS	\$ 246,646,026	\$ 6,590,677
<b>TOTAL ASSETS &amp; EARNINGS</b>	<b>\$ 1,137,938,078</b>	<b>\$ 20,403,394</b>
US Bank Fees		\$ 653,297
ACG Fees		\$ 160,000
<b>PROJECTED NET ANNUAL INCOME</b>		<b>\$ 19,590,097</b>

# NERT 2017 GOALS AND PRIORTIES

## Quarterly Progress

Goal*	Timeframe	Q1	Q2	Q3	Q4
Conduct Value Engineering for implementation of Treatability/Pilot Studies or other remedial effort costing greater than \$2M consistent with US EPA and/or Army Corps of Engineers guidance. This task will begin with all reports submitted after July 1, 2017	July 2017	N/A	N/A		
Continue optimizing GWETS system through the COP with comprehensive considerations of mass removal, hydraulic capture/Northshore Road perchlorate mass loading, and GW-11 levels targeting the removal of 400,000 pounds of perchlorate from the environmental in 2017	December 2017	O	O	O	
Submit recommendation and budget to upgrade various segments of the effluent pipeline to enable greater flow by June 30, 2017	June 2017	O	C		

O – Ongoing      C - Completed

\* As established in NDEP's April 26, 2017 performance assessment letter

# NERT 2017 GOALS AND PRIORTIES

## Quarterly Progress

Milestone Activity	Timeframe	Q1	Q2	Q3	Q4
Begin monthly sampling at some/all USGS gauging stations by June 30, 2017	June 2017		C	O	
Submit Phase III RI work plan for the Eastside Study Area by June 30, 2017 and initiate sampling program by November 30, 2017	June 2017	O	C		
	November 2017	--	--		
Summarize the results from first 3 months of operation of the IX at Lift Station #1 and prepare a cost evaluation of multiple scenarios for treating SWF groundwater by June 30, 2017	June 2017		C		

O – Ongoing      C - Completed

# NERT 2017 GOALS AND PRIORTIES

## Quarterly Progress

Milestone Activity	Timeframe	Q1	Q2	Q3	Q4
<p>SNWA Weir Dewatering Treatment Project, ready to receive water by July 31, 2017 as ordered by NDEP<sup>2,3</sup></p> <p>2 – Weir treatment system readiness data dependent upon granting of access by US Bureau of Reclamation</p> <p>3 – All work off US Bureau of Reclamation property will be contingent on access being granted by US BOR</p>	<p>July 2017 <b>ADJUSTED</b> DEC 2017</p>	O	O	O	
Submit water management plan (includes GW-11 replacement; AP-5 treatment and continued implementation of the COP) by September 30, 2017	September 2017	O	O	O	
Submit Unit Buildings 4 and 5 Investigation Second Mobilization Technical Memorandum (including total mass and distribution for COPCs and third mobilization work plan) by May 30, 2017	May 2017	O	C	--	

O – Ongoing

C - Completed

# NERT 2017 GOALS AND PRIORTIES

## Quarterly Progress

Milestone Activity	Timeframe	Q1	Q2	Q3	Q4
Perform first injection for Seep Well Field Bioremediation Treatability Study by September 30, 2017	September 2017	O	O	O	
Complete Phase II RI field work by December 31, 2017	December 2017	O	O	O	
Submit HLC Mass Estimates and Performance Metrics Technical Memorandum by September 30, 2017	September 2017	O	O	O	
Submit Las Vegas Wash Bioremediation Pilot Study by September 30, 2017	September 2017	--	O	O	
Initiate treatment of AP-5 decant in FBRs by July 31, 2017	July 2017	O	O	C	

O – Ongoing      C - Completed

# NERT 2017 GOALS AND PRIORTIES

## Quarterly Progress

Milestone Activity	Timeframe	Q1	Q2	Q3	Q4
Submit AECOM Technical Memorandum on the initial borings/wells by December 31, 2017 (NDEP managed)	December 2017	O	O	O	
Submit AECOM Technical Memorandum for full scale geophysical field work and by December 31, 2017 (NDEP managed) <sup>3</sup> 3 – All work of US Bureau of Reclamation property will be contingent on access being granted by US BOR	December 2017	--	--	--	
Begin interview process for additional NERT and/or Le Petomane employee	July 2017	O	C	O	

O – Ongoing

C - Completed

# NERT 2017 GOALS AND PRIORTIES

## Quarterly Progress

Milestone Activity	Timeframe	Q1	Q2	Q3	Q4
NERT will begin using information gathered during the Environmental Footprint Analysis to apply the BMP Checklist from the ASTM Standard Guide for Greener Cleanups by June 30, 2017 and implement selected BMPs in the July 1, 2017 – June 30, 2018 performance reporting period	June 2017	--	C	O	

***4 Completed On-Schedule; 4 Early. All others in progress.***

O – Ongoing      C - Completed

## COP MID-YEAR UPDATE

### 2017 Objectives\*

1. Continued AWF Optimization (ART-2 and ART-8 extraction rate increases) ☒
2. IX System Deployment/SWF Optimization ☒
3. Continue AP Area Soil Flushing Treatability Study (Plots 1 and 2) ☒
4. Initiate RI/FS Treatability Studies ☒
  - a. SWF Area Groundwater Bioremediation ☒
  - b. VER ☒
  - c. Unit 4 Bioremediation ☒

**REMOVE 400,000 LBS. OF PERCHLORATE IN 2017**



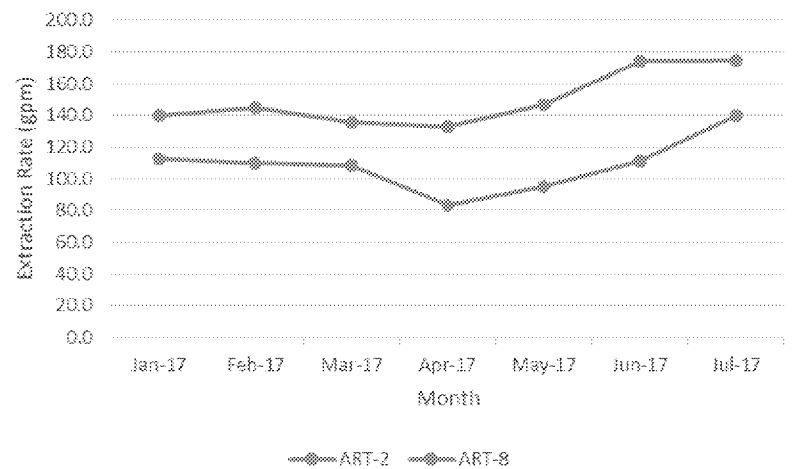
\* As established in NDEP's April 26, 2017 performance assessment letter



# COP MID-YEAR UPDATE

## AWF Optimization

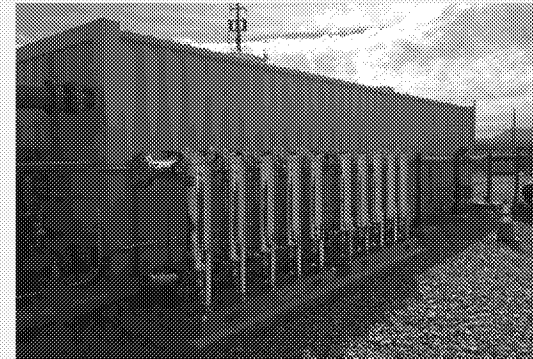
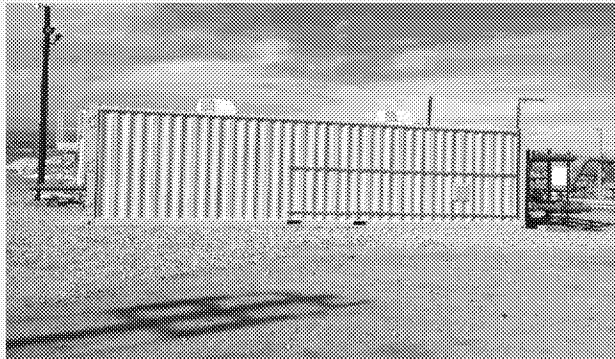
- New pump installed in ART-8 and reprogramming of control system to allow pumping ART-2 primary and buddy well
- AWF Extraction Rate increased to 460 - 480 gpm (8 - 13 % increase in flow)
- Perchlorate mass removal rate improved by 63 lbs/day (1,908 lbs/month) 14.8% over 2016 average removal rate for AWF



# COP MID-YEAR UPDATE

## IX System/SWF Opt.

- Operation of the IX Treatment System began February 9<sup>th</sup>
- IX can handle all SWF flow if needed (IX capacity is 1,000 gpm)
- Currently treating flows from PC-118, PC-119, PC-120, PC-121, and PC-133 (~250 gpm)
- IX System Operation and Efficiency Evaluation submitted on June 30<sup>th</sup>
- Recommended shifting treatment of groundwater extracted from PC-118 from the IX to the FBRs for treatment



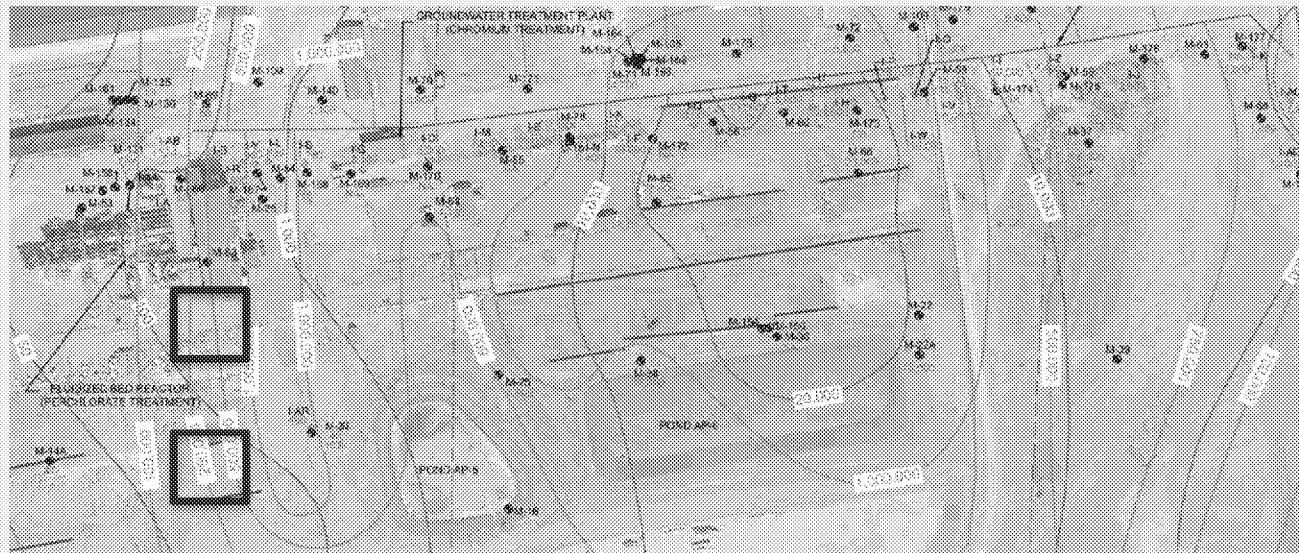
# SWF Area Bio TS

- [illegible]

# COP MID-YEAR UPDATE

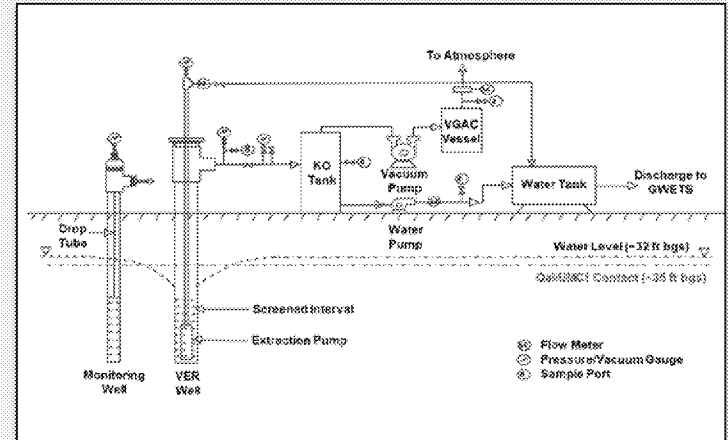
## AP Area Soil Flushing TS

- Flushing Plot 1 completed in late July
- Flushing at Plot 2 was initiated in late July
- A total of 17,408 lbs of perchlorate has been removed by the AP Area extraction wells (as of August 4<sup>th</sup>)



# VERTS

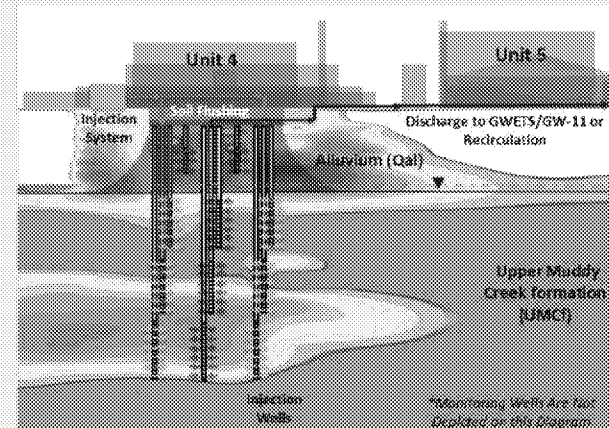
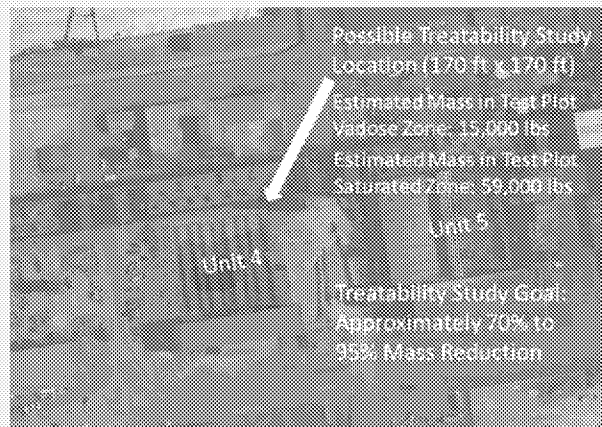
- 



# COP MID-YEAR UPDATE

## Unit 4 Bioremediation TS

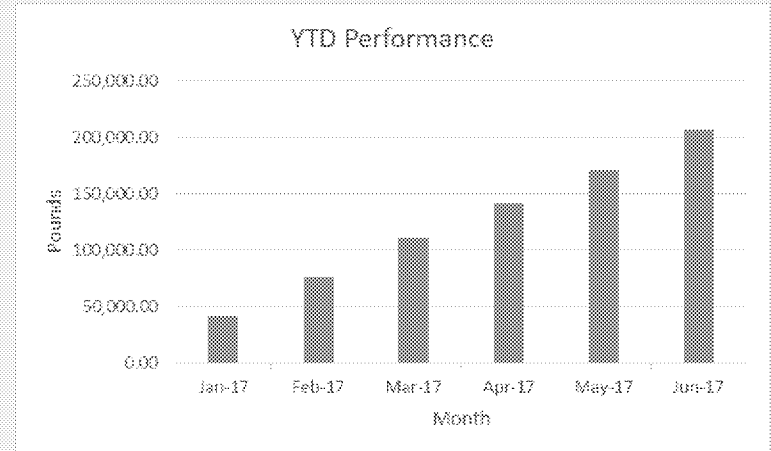
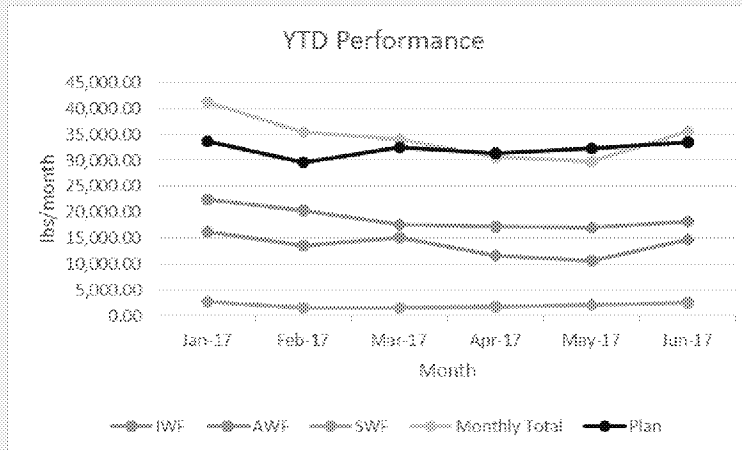
- Treatability Study technical approach presented on August 9<sup>th</sup>
- Down flushing with carbon substrate to assess treatment of perchlorate in vadose zone
- Direct injections at numerous points in the source area below groundwater into the UMCf
- Work Plan to be submitted by October 30<sup>th</sup>



# COP MID-YEAR UPDATE

## Mid-Year Summary

- 206,647 lbs of perchlorate have been removed from the environment (through June)
- YTD performance is slightly ahead of plan (~13,707 lbs)



## 2017 MID-YEAR CHECK-IN

### NERT Cost Controls

- Arcadis review of AP-5 closure plan
- Ramboll Soil Background Concentration Study
- GWETS effluent pipeline evaluation recommendations
- Routing of PC-118 to FBRs
- Phased VER approach
- AP-Area infrastructure reuse
- Tetra Tech AP-5 O&M Agreement
- ETI O&M Agreement
- ETI SIEMENS effort
- Direct dialog with BRC



# NERT PERFORMANCE SELF ASSESSMENT

## Self Assessment

CATEGORY	TRUSTEE ACTIONS	RATING
Quality of Service	Fulfillment of core Trust Requirements	ME / ME
	Ownership of the Henderson Property	EE / EE
	Performance of administrative and property management functions related to the Henderson Property	ME / ME
	Management and/or funding implementation of Environmental Actions for the Henderson Legacy Conditions that are approved by the Henderson Lead Agency and the payment of future oversight costs of the Lead and Non-Lead Agency	ME / ME
	Pursing claims and obtaining recoveries under the Henderson Chartis Policy	EE / EE

# NERT PERFORMANCE SELF ASSESSMENT

## Self Assessment

CATEGORY	TRUSTEE ACTIONS	RATING
Quality of Service	Actions as landlord under the Henderson Facility Lease	ME / ME
	Actions as substitute party for Tronox LLC under the 2006 Henderson Consent Decree	EE / EE
	Accuracy of reports/deliverables	ME / ME
	Effectiveness of personnel	ME / EE
	Technical excellence	ME / EE
	Effectiveness of quality control program	ME / ME

# NERT PERFORMANCE SELF ASSESSMENT

## Self Assessment

CATEGORY	TRUSTEE ACTIONS	RATING
<b>Cost Control</b>	Budget estimate accuracy and cost control	EE / EE
	Current, accurate, supported and complete fee applications	ME / ME
	Cost efficiencies or deficiencies	EE / EE
<b>Schedule</b>	Maintains current project schedule with regular updates	ME / ME
	Met project interim milestones	ME / ME
	Responsiveness to technical feedback	ME / ME
	Met deliverables schedules	ME/ EE

# NERT PERFORMANCE SELF ASSESSMENT

## Self Assessment

CATEGORY	TRUSTEE ACTIONS	RATING
<b>Business Relations</b>	Effective management	ME / ME
	Reasonable/cooperative	EE / EE
	Responsiveness to Trust Requirements	ME / ME
	Informs of issues/problems	EE / EE
	Flexibility	EE / EE
	Pro-active vs. reactive	EE/ EE

# NERT PERFORMANCE SELF ASSESSMENT

## Self Assessment

CATEGORY	TRUSTEE ACTIONS	RATING
<b>Management of Key Personnel</b>	Effective management	ME / ME
	Reasonable/cooperative	ME / ME
	Responsiveness to Trust Requirements	ME / ME
	Informs of issues/problems	EE / EE
	Flexibility	ME / ME
	Pro-active vs. reactive	ME / ME

# NERT PERFORMANCE SELF ASSESSMENT

## Self Assessment

CATEGORY	TRUSTEE ACTIONS	RATING
<b>Environmental Performance</b>	Overall progress towards NERT site goals	ME / EE
	Projects on schedule to meet Final Remedy timeframes	ME / EE
	Increase in Perchlorate mass removal from groundwater met projections and milestones	NA / ME
	Decrease in Perchlorate loading to Las Vegas Wash along NERT RI Study Area and Downgradient Study Area	ME / ME
	Provide multiple lines of evidence to demonstrate the effective management of the plume and plume shrinkage	ME / ME

# **AUGUST 10, 2017 MID-YEAR CHECK-IN MEETING**

Q&A